



ANNUAL BOTANY / NATURAL AREA REPORT FISCAL YEAR 2003



Prineville District
Bureau of Land Management

STAFFING

Ron Halvorson (NRS-PFT), JoAnne Armson (NRT-PFT), Gail Smith (Biotech Intermittent) and Rick Demmer (NRS-Term)

Ron spends about half his time in botany, as district botanist, and the other half in budget, as district budget analyst. He gets out in the field during the spring and summer, at least a little.

JoAnne's time in botany was somewhat reduced in FY 2003, with much of her time spent working on Rangeland Standards and Guides. She was able to accomplish some key monitoring assignments, however.

Gail worked in the field for only a couple of weeks, mostly helping to monitor the pumice grape fern (*Botrychium pumicola*). She devoted time in the off-season keeping the files organized and working with the District herbarium.

Rick spent a major portion of the year working with JoAnne on Standards and Guides. The two constitute an S & G "SWAT" team, doing analysis of the smaller, less controversial allotments scattered across the district. Between the two of them they have most resource management skills covered. Rick also continues to monitor microbiotic crust, amphibians, beaver and riparian vegetation for various district efforts.

MAJOR WORKLOAD/ACCOMPLISHMENTS

A. INVENTORY/NEW POPULATIONS FOUND

Three new populations of special status plants were documented. This includes one population each of *Artemisia ludoviciana* ssp. *estesii*, *Camissonia pygmaea* and *Thelypodium eucosmum*.

Standards and Guides analysis of a small parcel of Public Land along the Middle Deschutes River, north of Tumalo, resulted in a new location for *Artemisia ludoviciana* ssp. *estesii*, commonly called Estes' wormwood (ONHIC List 1 and Bureau Sensitive). It was not surprising to find the plant here as it is found scattered all along the Deschutes River in this portion of Central Oregon. No threats or other disturbances were noted.

A population of *Camissonia pygmaea*, the dwarf evening primrose (ONHIC List 1 and a State candidate for listing as T/E), was documented on public land between Spray and Kimberly. This population had been found earlier by non-BLM botanist and was on record with the Oregon Natural

Heritage Information Center but had not been observed by BLM personnel. Located in a gravelly, dry wash tributary to the John Day River, this small plant can easily be overlooked (and no doubt has been). The plant is a candidate for state listing as endangered or threatened. This is the only known population with a specific location (as opposed to older, historic locations which only had township and range references) on BLM land in the district. More inventory is needed.

Finally, another population of arrow-leaf thelypody, *Thelypodium eucosmum*, a plant listed as Threatened in Oregon, was documented in (where else) the Sutton Mountain area. The population was found during a day river trip and the river is the only avenue of access. Typical of most *Thelypodium eucosmum* populations, it was found in a steep, isolated, somewhat inaccessible drainage, at least inaccessible to those four-legged critters who would like to eat this palatable plant.

B. MONITORING

A total of 52 special status plant populations were monitored in 2003. These included *Achnatherum hendersonii* (1), *Astragalus diaphanus* var. *diurnus* (6), *Astragalus tyghensis* (10), *Botrychium pumicola* (20), *Castilleja chlorotica* (2), *Camissonia pygmaea* (1), *Lomatium ochocense* (3), *Lomatium suksdorfii* (1), *Pilularia americana* (1), *Ranunculus reconditis* (1) and *Thelypodium eucosmum* (6).

A single population of *Achnatherum hendersonii* (Henderson's ricegrass – ONHIC List 1 and a Candidate for State listing as T/E) was monitored in conjunction with *Lomatium ochocense*. It was too late for much quantification and very dry as well. No disturbances or concerns were noted.

The *Astragalus diaphanus* var. *diurnus* (transparent milkvetch – State Threatened) populations are all located within the corridor of the South Fork John Day Wild and Scenic River. Whether due to the current dry year or because of last year, very few second year plants were noted. The populations monitored all had previous concerns related to wild horse, cattle and wildlife trailing. The horses were removed last year and the situation appears stable, with no long-term effects expected.

Monitored populations of *Astragalus tyghensis* (Tygh Valley milkvetch – State Threatened) generally seem to be flourishing except where competition from oak (*Quercus garryana*) is an apparent problem. The population that has been hand weeded (hoed) for diffuse knapweed for several years was weeded once again with the knapweed continuing to decrease in number. However, morning glory (*Convolvulus* sp.) is making an appearance. The population of *Astragalus tyghensis* in the Criterion area, which was inadvertently sprayed in 1998, now has 13 plants out of an original 23, once again an increase of two from last year. A population burned by wildfire in 2002 was monitored, and the plants appeared vigorous and reproductive.

The focus of our monitoring efforts this FY was on *Botrychium pumicola* (pumice grape fern – State Threatened). Because the grape fern is so variable in its emergence and response to weather,

monitoring only once every two to three years may not be giving us a true picture of its status. 2003 was the first year of three consecutive years of monitoring, to try and see what is going on. For several years now it has seemed that our populations are being reduced in number, for whatever reason. The possible exception is one population found to extend under a powerline that is regularly mowed to reduce tree and shrub cover. A very complete survey was accomplished, utilizing seven people, and an astonishing 724 plants were located. We now have a complete count for each powerline segment (between identified poles) and so this should provide some good data in the future. One can't help but wonder what's going on here.

One burned population of *Castilleja chlorotica* (green-tinged paintbrush – ONHIC List 1 and Bureau Sensitive) was monitored again this year. The two new plants noted last year continued to persist, although like last year, 2003 was a poor year for *Castilleja*.



Botrychium pumicola

The newly documented population of *Camissonia pygmaea* (dwarf evening-primrose – ONHIC List 1 and a Candidate for State listing as T/E) was visited twice, so the second visit can be counted as monitoring. It appears that out of the 100-plus plants observed in May, by mid-July all but four had succumbed to the summer heat and drought. These remaining plants had grown significantly and appeared to have produced a good seed crop. It will be interesting to check this population in the future, and as it is adjacent to a paved highway, it will be easy to do.

All three populations of *Lomatium ochocense* (Ochoco biscuitroot – ONHIC List 1 and Bureau Sensitive) were monitored, with the quantitative study (long, narrow quadrats) replicated again after five years. Data analysis is forthcoming, but it seems that the population is stable. No disturbances were noted and none are expected, given the rocky habitat and the fact that all are within the North Fork WSA.

Our single population of *Lomatium suksdorfii* (Suksdorf's biscuitroot – ONHIC List 1 and a

Candidate for State listing as T/E) was visited near The Dalles. Except for a couple of heavily used cattle/wildlife trails across the area, the population seems secure. There was a large wildfire in this area in 2002, but this population did not burn.

Our only known population of *Pilularia americana* (American pillwort – ONHIC List 2 and Bureau Sensitive) was visited in its hangout near Hampton. Given the drought, the reservoir was dry and no pillworts were observed. Since they can withstand years of drought before appearing during good years, this isn't a concern.

Our only population of *Ranunculus reconditis* (Dalles Mountain buttercup – Endangered in Oregon), the "RAREest plant in the district) was once again visited on Mill Creek Ridge. As this is the only known population in federal ownership, we visit it at least

annually. The timing this year was a little later than optimal, with few if any of the plants in flower. No disturbances were noted although diffuse knapweed appears to be spreading along the road south of the population. The district weed specialist has been notified and although not threatening the *Ranunculus reconditis* at the moment, this will have to be closely monitored and control measures undertaken.

Finally, six populations of *Thelypodium eucosmum* (arrowleaf thelypody – Threatened in Oregon) were visited. Five of the populations appeared at least stable, with a couple fairly vigorous. One population appears to have a cow problem, with livestock using the juniper trees, under which the thelypody likes to grow, for shade. We'll explore ways to deal with this, which might simply involve burning the individual trees to remove the shade attractant.

C. CLEARANCES

This was a "slow" year for project clearance work. Only five projects were surveyed in the field totaling slightly more than 500 acres: two juniper thinning projects; two road rights-of-way and an ATV route re-location. Conversely, 13 projects were waived, the majority of which were fuels reduction/juniper

thinning projects. These projects were in areas which had already been surveyed or were in areas not suspected of harboring special status plants based on copious survey work in adjacent, similar areas. Geo-area statistics are found on page 7.

OTHER ACCOMPLISHMENTS

A. NATURAL AREA MANAGEMENT

Forest Creeks ACEC/RNA was visited once with Reid Schuller, the executive director of the Natural Areas Association, the floristic list was updated and no disturbances/concerns were noted. The area, within the North Fork WSA, is generally excluded from livestock grazing by its topography.

Horse Ridge ACEC/RNA was visited once by the "botanical" staff and was over flown by the wilderness staff (it is a Wilderness "Instant Study Area"). The botanical visit was in conjunction with the annual visit by the National Natural Landmark coordinator from the National Park Service, Steve Gibbons. Along with a general visit to the area weeds were pulled from an area that burned in 2001.

Mountain bike use in the RNA seems to be

decreasing somewhat, or at least a little more attention is being paid to the fence. This is an ongoing concern that we need to keep an eye on. The recreation staff visited the RNA several times during 2003 and also helped to make sure the boundary fence was intact.

Two small lightning-caused fires occurred in the RNA this year. One actually was allowed to burn according to protocol. These will be monitored in 2004.

The **Powell Butte ACEC/RNA** was not visited in 2003. The concern that a major development might occur next to the area has proven to be well founded. The County Planning Commission has approved, thus far, a large destination resort on this side of Powell Butte. It does not bode well for the

RNA to have a significant number of people living adjacent to it.

The Island ACEC/RNA was visited only once by BLM personnel in FY 2002, and this by JoAnne to lead a “Becoming an Outdoor Woman” field trip (sponsored by ODF&W). The Native Plant Society of Oregon visited the area to pull medusahead, as did a YCC crew from the Forest Service. There is some concern that we may not be winning this war with weeds, even in this small area.

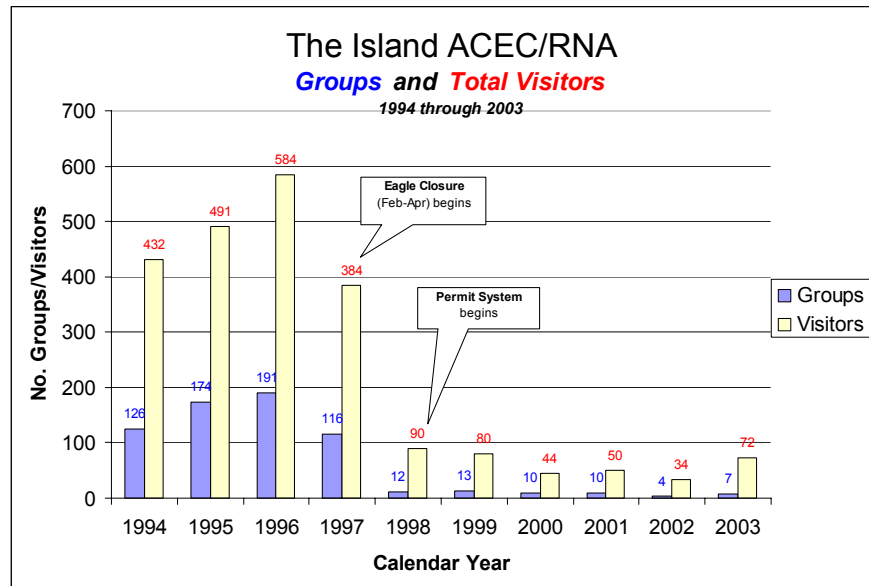
The area appears to be doing well, although needing some natural fire. Despite the drought, many of the native species, especially the bunchgrasses, did reasonably well

B. CHALLENGE COST SHARE / COOPERATIVE EFFORTS / OUTREACH

One challenge cost share project was funded during FY 2003: the second year of a disturbance ecology study of *Astragalus peckii* (Peck’s milkvetch – Threatened in Oregon), a species endemic to the area between Bend and Sisters, and in locations near Chemult. This was the year that initial “disturbances” were to take place, including compaction, soil disturbance, overstory removal and fire.

Ron led the continuing “plant walk” in support of Prineville Reservoir State Park’s fourth annual “Star

this year. We are still awaiting designation of this area as a National Natural Landmark by the National Park Service. The chart shows visitor use on The Island from 1994 through 2003.



Party”. This is an “extra curricular” event to help broaden participants’ knowledge of the natural world and probably not surprisingly, most of the participants have little knowledge about the common plants in Central Oregon. The wildflowers were blooming profusely, but since there aren’t very many at this site, much of the discussion focused on western juniper.

Ron also gave a presentation at the April meeting of the High Desert Chapter of the Native Plant Society.

C. SEEDS OF SUCCESS AND NATIVE PLANT RESTORATION



The Prineville District was privileged to host a Seeds of Success collection team this year. The team, supported by the Student Conservation Association with ties to Americorps, consisted of four college-age women (Teague, Julie, Tricia and Jessica) with an interest in the outdoors. Two had recent degrees and two were between their junior and senior years. To facilitate this effort, OSO gave us funds to

hire a seasonal botanist (Nelson) as a crew leader. The process got off to somewhat of a slow start in mid-June and continued on into mid-October. In the end, seeds from 34 species were collected and sent to the Royal Botanic Garden in Kew, England. JoAnne assisted with this effort throughout the season as did Ron, early on, in helping to get it up and running. Were we to do this again the team should definitely start earlier in the season.

D. OTHER PROGRAM SUPPORT

Botanical input continued to be provided to all resource management programs as needed, especially as related to the lands and hazardous fuel reduction programs. There was also involvement in

several plans, most notably the Upper Deschutes RMP/EIS. As mentioned earlier, a significant amount of time on the part of JoAnne and Rick was spent with Rangeland Standards and Guides evaluations.

E. OTHER ITEMS OF INTEREST

JoAnne attended Native Plant Restoration and Management symposium in Corvallis in February, the Native Plant Materials coordination meeting in Burns and the Bend Seeds of Success training in June. Ron attended the biannual status review

meeting in Corvallis in April. JoAnne, Rick and Ron all attended a *Carex* (sedge) workshop in August sponsored by Burns BLM, which included a field trip to the Steens.

GEO-AREA STATISTICS

High Desert

7 populations monitored (*Achnatherum hendersonii* – 1; *Castilleja chlorotica* – 2; *Lomatium ochocense* – 3; *Pilularia americana* – 1)
6 botanical waivers (fuels treatments and gap fences)
536 acres botanical inventory (juniper thinnings, road ROW and ATV route relocation)

Lower Deschutes

12 populations monitored (*Astragalus tyghensis* - 10; *Lomatium suksdorfii* – 1; *Ranunculus reconditis* – 1)
1 botanical waiver (boat launch/day use area improvements)

Lower John Day

2 new populations found (*Camissonia pygmaea* - 1; *Thelypodium eucosmum* - 1)
6 populations monitored (*Camissonia pygmaea* - 1; *Thelypodium eucosmum* - 5)
2 botanical waiver (prescribed burns)

Upper Deschutes

1 new population found (*Artemisia ludoviciana* ssp. *estesii*)
20 populations monitored (*Botrychium pumicola*)
2 botanical waivers (road right-of-way and juniper thinning)

Upper John Day

7 populations monitored (*Astragalus diaphanus* var. *diurnus* - 6; *Thelypodium eucosmum* - 1)
2 botanical waivers (fuels treatment)
5 acres botanical clearance (road ROW)